UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,482	07/27/2006	Marcos C. Tzannes	5550-52-PUS	1762

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EXAMINER
CORRIELUS, JEAN B

ART UNIT	PAPER NUMBER
2611	

NOTIFICATION DATE	DELIVERY MODE
06/30/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<table>
<tr><td rowspan="2">Office Action Summary</td><td>Application No.
10/597,482</td><td>Applicant(s)
TZANNES, MARCOS C.</td></tr>
<tr><td>Examiner
Jean B. Corrielus</td><td>Art Unit
2611</td></tr>
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>12 May 2009</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>73-87</u> is/are pending in the application.

    4a) Of the above claim(s) <u>73-78,86 and 87</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>79-85</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1.   Applicant's election without traverse of claims 79-85 in the reply filed on 5/12/09 is acknowledged.

Priority

2.   Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119(e) as follows:

The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed application, Application No. 60/549,804 and 60/555,982, each fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application. for instance, claim 79 recites: In a multicarrier modulation environment, a method for determining a length of an impulse noise event comprising: demodulating a plurality of bits using a bit allocation table; and comparing the demodulated bits to a known bit pattern, wherein inconsistencies between the demodulated bit pattern and the

known bit pattern are used to determine the length of the impulse noise event. However,

none of the prior filed applications mentioned above provides support for the limitations

(as underlined) recited in the claim

With respect to claim 80 none of the prior applications supports the limitations of:

The method of claim 79, wherein a forward error correction and interleaving function is

disabled.

With respect to claim 81 none of the prior applications supports the limitations of:

The method of claim 79, further comprising transmitting a message indicating the length

of the impulse noise event.

With respect to claim 82 none of the prior applications supports the limitations of"

The method of claim 79, wherein the length of the impulse noise event is determined

based on at least one of a length in time, a number of affected bits, a number of

affected ATM cells, a number of affected DMT packets, a number of affected DMT

symbols and a number of affected FEC codewords".

With respect to claim 83 none of the prior applications supports the limitations of :

: The method of claim 79, further comprising comparing the demodulated bits to a

predefined transmitted bit pattern to determine a repetition rate of a length of an impulse

noise event.

With respect to claim 84 none of the prior applications supports the limitations of:

A method of impulse noise length period determination comprising: comparing

bits demodulated using a bit allocation table to a known bit pattern, the comparison

revealing inconsistencies that are correlated to a length of an impulse noise event; and

comparing the length of the impulse noise event to lengths of other similar

impulse noise events to determine a period therebetween.

With respect to claim 85 none of the prior applications supports the limitations of:

A impulse noise length period determination system comprising: means for comparing

bits demodulated using a bit allocation table to a known bit pattern, the comparison

revealing inconsistencies that are correlated to a length of an impulse noise event; and

means for comparing the length of the impulse noise event to lengths of other similar

impulse noise events to determine a period therebetween. Accordingly, claims 79-85

are not entitled to the benefit of the prior applications, mentioned above.

3.   This application is claiming the benefit of prior-filed nonprovisional application

No. 60/555,982 under 35 U.S.C. 120, 121, or 365(c). Copendency between the current

application and the prior application is required. Since the applications are not

copending, the benefit claim to the prior-filed nonprovisional application is improper.

Applicant is required to delete the reference to the prior-filed application from the first

sentence(s) of the specification, or the application data sheet, depending on where the

reference was originally submitted, unless applicant can establish copendency between

the applications.

Claim Rejections - 35 USC § 101

4.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
conditions and requirements of this title.

5.   Claims 79-84 are rejected under 35 U.S.C. 101 as not falling within one of the

four statutory categories of invention. Supreme Court precedent[1] and recent Federal

Circuit decisions[2] indicate that a statutory "process" under 35 U.S.C. 101 must (1) be

tied to another statutory category (such as a particular apparatus), or (2) transform

underlying subject matter (such as an article or material) to a different state or thing.

While the instant claim recites a series of steps or acts to be performed, the claim

neither transforms underlying subject matter nor is positively tied to another statutory

category that accomplishes the claimed method steps, and therefore does not qualify as

a statutory process. For example, let's consider claim 79, the method including steps

of demodulating and comparing is of sufficient breadth that it would be reasonably

interpreted as a series of steps completely performed mentally, verbally or without a

machine. The claim fails to recite any corresponding hardware in combination with the

method step(s) so as to effectively tie the process claim with a statutory class of

invention, i.e. a particular apparatus. the same analysis applies to each of claims 80-84,

respectively.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the

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[1] *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

[2] *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7.   Claims 79 and 82-85 are rejected under 35 U.S.C. 102(e) as being Norrell et al US Patent Application publication No. 2006/0078044.

As per claim 79, Norrel et al teaches a method and apparatus fig. 2 and fig. 4 comprising demodulating in demodulator 424 a plurality of bits as received on line 107 using a bit allocation table (426/428) comparing the demodulated data points (bits) to a known data points (bits) wherein errors (inconsistencies) are used to determine length of impulse noise note paragraph 0032, paragraph 0034, lines 7-9 and fig. 4.

as per claim 82, the length of the impulse noise has to be determined based on the length in time since it is measured in microseconds see paragraphs 0024.

As per claim 83, the repetition rate of the impulse noise is also determined, note fig. 4 and paragraph 0034, lines 6-7

As per claim 84 see claim 79 in addition, fig. 4 shows clearly the period of between the impulse noises, the length of one impulse noise has to be inherently compare to other similar impulse noise in order to generate the period between the impulses.

As per claim 85, see claim 84.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9.   Claim 80 is rejected under 35 U.S.C. 103(a) as being unpatentable over Norrell

et al US Patent Application Publication No. 2006/0078044 in view of Coleman et al US

Patent No. 7,162,676.

As per claim 80, as applied to claim 79 above, Norrell et al teaches every feature

of the claimed invention does not explicitly teach the further limitation of disabling FEC

and interleaving function. However, Coleman et al teaches the further limitation of

disabling FEC and interleaving function see col. 9, lines 42-47. Given that fact, it would

have been obvious to one skill in the art to incorporate such a teaching in Norrell et al in

order to avoid false correction if more than one error is detected when for instance a

single bit error correcting code is employed.

10.   Claim 81 is rejected under 35 U.S.C. 103(a) as being unpatentable over Norrell

et al US Patent Application Publication No. 2006/0078044.

As per claim 81, as applied to claim 79 above, Norrell et al teaches every feature

of the claimed invention does not explicitly teach the further limitation of transmitting a

message indicating the length of the impulse noise event. However, examiner notes that

it is well known in the art to transmit a feedback signal to a transmitter to indicate the

status of the transmission channel. given that it would have been obvious to one skill in

the art to transmit a message indicating the length of the impulse noise event, so as to

modify transmission parameters to as to minimize effects of impulse noise on the

transmit signal.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Monday-Thursday from 9:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jean B Corrielus/
Primary Examiner, Art Unit 2611